

Seismic Safety Commission
Minutes of Meeting
February 14, 2002
State Capitol, Room 444
Sacramento, California

Members Participating

Bruce R. Clark, Chairman
Stan Y. Moy, Vice Chairman
Andrew Adelman
Senator Richard Alarcon
William L. Gates
Lawrence T. Klein
Douglas E. Mochizuki
Ashok S. Patwardhan
Daniel Shapiro

Members Absent

Mark Church
Linden Nishinaga

Staff Participating

Richard McCarthy
Karen Cogan
Robert Anderson
Abby Browning
Henry Reyes
Henry Sepulveda
Fred Turner
Vince Vibat

I. CALL TO ORDER/ROLL CALL

The meeting of the Seismic Safety Commission was called to order by Chairman Bruce Clark at 9:02 a.m. Executive Assistant Karen Cogan called the roll and confirmed the quorum.

II. CHAIRMAN'S REMARKS

Chairman Clark welcomed commissioners, staff, and guests. He said a significant part of the meeting would be devoted to a cost-benefit workshop session, with presentations from experts and time for Commission discussion.

Chairman Clark observed that a pending bill dealing with Hetch Hetchy may be of some interest to the Commission as it pertains to seismic issues. He noted the Commission staff is trying to arrange a tour of the Hetch Hetchy facilities in conjunction with the May meeting.

Chairman Clark indicated it was time for the Commission to update its research implementation plan. In keeping with that task, the June meeting will include a workshop session on the latest advances in research and technology dealing with seismic safety.

III. APPROVAL OF JANUARY 10, 2002 MEETING MINUTES

ACTION: Commissioner Shapiro made a motion, seconded by Commissioner Mochizuki, that:

The Commission approve the minutes of the January 10 meeting.

Referring to the top paragraph on Page 3, third line, Chairman Clark noted the word “definition” should be changed to “definite.”

* Motion carried, 8 - 0 (Commissioner Moy absent during voting).

IV. COMMITTEE REPORTS

Budget and Planning Committee

Commissioner Gates referred to the written summary of the Commission’s budget status. He noted that if another \$35,000 cut is mandated, as is currently being considered, there will be no year-end surplus.

V. EXECUTIVE DIRECTOR’S REPORT

Hetch Hetchy Field Trip

Executive Director Richard McCarthy thanked Commissioner Klein for help in arranging a tour of the Hetch Hetchy facilities in conjunction with the May meeting. He said the staff will poll commissioners later regarding their available dates.

California Earthquake Loss Reduction Plan Update

Mr. McCarthy reported that the *Plan* update, submitted to the Governor in December, was approved and forwarded to OES.

Gas Shut-Off Valve Controversy

Mr. McCarthy noted the Commission received a letter from a gas valve manufacturer representative raising concerns about the way the Ad Hoc Committee on Gas Valve Safety had developed its report and recommendations regarding excess flow valves and seismic shut-off valves. He explained that the ad hoc group was convened to investigate all sides of the issue and provide information to assist local governments and citizens. The committee was charged with preparing a report and developing an informational flyer for the *Homeowner’s Guide to Earthquake Safety* and the *Commercial Building Owner’s Guide to Earthquake Safety*.

Commissioner Adelman suggested postponing further discussion of this issue until Commissioner Moy, the chair of the ad hoc committee, had arrived. Other commissioners agreed.

Annual PEER Center Conference

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Mr. Robert Anderson reported attending the second annual Pacific Earthquake Engineering Research (PEER) Center conference in Oakland on February 17 and 18. He said the first day was devoted to discussion of test bed methodologies, plus an interesting presentation by EQE on damage to the World Trade Center and its application to earthquake damage to high-rise buildings. Mr. Anderson noted the second day of the conference featured group presentations on performance-based methodologies and specific projects; the third day was a closed session.

Mr. Anderson discussed the PEER Center's funding structure. He noted the Center itself and its funding level were established by legislation, and funds come from Caltrans, the California Energy Commission, PG&E, SCEC, Stanford University, the National Science Foundation, FEMA, the State of Washington, and others. Total funding last year was \$5.85 million, of which over \$3 million came from state sources and \$1.6 million from UC Berkeley. Mr. Anderson said Caltrans' interests in earthquake-related research include improving ground motion estimates, refining shake maps, three-dimensional velocity modeling, establishing a library with the California Geological Survey (formerly CDMG), and modeling soil effects.

Commission Website

Mr. Anderson reported that major progress has been made in converting many old Commission documents, including Northridge earthquake reports, for posting on the Commission Website. The staff expects to complete Northridge documents in March and will then proceed to convert Loma Prieta materials. Mr. Anderson said the *California Earthquake Loss Reduction Plan* is posted on the Website, along with information on each element and the status of each initiatives.

Commissioner Patwardhan recommended developing a policy regarding appropriate links with the Commission's Website. Mr. Anderson said many links are already established. He stated there had been only one outside request so far. Mr. Vince Vibat added that links to organizations with specific expertise are displayed on the pages about each *Plan* initiative.

Commissioners agreed it would be helpful to have a policy or guidelines for determining what kinds of groups and information should be linked with the Commission's Website. Chairman Clark asked the staff to develop a draft policy and set of procedures for the Commission's review at the next meeting.

Gas Shutoff Valve Controversy (Continued)

Commissioner Moy reported that the Ad Hoc Committee on Gas Valve Safety is nearing the end of its year-long study of gas shutoff valves, and a preliminary draft report was presented at the last Commission meeting. Commissioner Moy noted Mr. Carl Strand's January 18 letter raises concerns about the findings in the report and the makeup and operation of the committee itself. He added the Commission has no mechanical engineer on staff with sufficient expertise to evaluate Mr. Strand's technical points.

Senior Structural Engineer Fred Turner commented that there is still time to make changes to the committee's report. He noted the committee is in the process of reballoting and voting on certain

specific issues.

Mr. Turner observed that the one of the key issues raised by Mr. Strand, whether excess flow valves should be allowed, is not within the Commission's purview; other agencies such as the Building Standards Commission, the Division of the State Architect (DSA), and IATMO are responsible for setting standards and developing code provisions governing such devices. Mr. Turner added that DSA's did not find Mr. Strand's arguments persuasive. DSA believes there is no need to change regulations now, recognizing the fact that balloting is still underway and no final determinations have been made.

Commissioner Adelman expressed his appreciation to the committee members for their hard work and dedication. He observed that discussions at committee meetings were often contentious, with much of the debate centered around whether excess flow valves or seismic shutoff valves were more effective. Commissioner Adelman noted the committee's draft report makes no recommendation regarding specific kinds of devices, and he asked whether more specific guidelines will be developed in the future. Commissioner Moy responded that the committee's charge was to educate and inform the public about the availability of gas shutoff valves; evaluation of devices is beyond the committee's purview. Commissioner Klein agreed, and noted regulatory agencies are looking at the issue and will decide whether the devices are effective.

Commissioner Klein commented that the language in the report indicates the risk of fire from earthquakes is relatively low. He expressed his opinion that there are more cost-effective mitigation measures than installing gas shutoff valves. He questioned the basis for the Los Angeles mandate.

Mr. Turner said DSA feels current regulations are adequate, and both types of devices are allowed. The committee concluded there was no one-size-fits-all solution; devices that work well in one setting may not be effective in another. Mr. Turner pointed out that California has areas of both high and low seismicity risk and high and low fire risk.

Commissioner Adelman encouraged the committee to invite more input from all interested parties before approving the final draft of the report. Commissioner Moy noted the process was characterized by acrimony throughout, primarily on the part of the manufacturer representatives. Chairman Clark observed that the manufacturer representatives resisted working together to arrive at a consensus. He expressed doubt that additional hearings would help.

Commissioner Patwardhan asked about Mr. Strand's allegations of conflicts of interest in committee members. Commissioner Moy responded that the committee was made up of a wide range of parties, including a number of special-interest parties and manufacturer representatives. He expressed his opinion that the committee's composition was as balanced as possible. Mr. Turner added that the membership was dominated by regulators, not special-interest groups.

Chairman Clark asked about the next steps in finalizing the report. Mr. Turner said the report will be completed when the reballoting process is finished. Commissioner Moy recommended

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releasing the report when ready. He noted the report can always be supplemented or revised later if Mr. Strand can prove his contentions.

Commissioner Alarcon recommended that the Commission obtain as broad a range of opinions as possible before making any recommendations. He suggested allowing dissenting committee members to submit minority reports so their comments can be considered as well. Commissioner Alarcon urged the Commission to provide a full opportunity to all sides to articulate their positions. He added that both types of shutoff valves appear to have some value; the issue is whether the devices should be mandated and whether they are appropriate for specific uses.

Mr. Turner explained that the committee was composed of three main groups: utilities, regulators, and valve manufacturers, and all of their positions were considered by the committee in its deliberations. Commissioner Patwardhan pointed out again that the committee was charged with providing information and education, not making a recommendation regarding the effectiveness of the valves.

Commissioner Adelman suggested that the Commission hold a public hearing before adopting the final report, similar to the process followed with the SB 1953 report. Other commissioners agreed with this approach.

Chairman Clark asked Mr. McCarthy to prepare a response to Mr. Strand's letter. Commissioner Moy commented that the Commission lacks the mechanical engineering expertise necessary to comment on the technical points. Chairman Clark also asked the staff to make sure to invite Mr. Strand to the hearing on the final report.

Resolution Honoring Former Commissioner Chang

ACTION: Commissioner Adelman made a motion, seconded by Commissioner Moy, that:

The Commission adopt the proposed resolution honoring former Commissioner Jerry Chang for his service and contributions.

* Motion carried, 9 - 0.

VI. LEGISLATIVE REPORT

Commission-Sponsored Bills

Director of Legislation Henry Sepulveda drew attention to his written report in the meeting packet.

Mr. Sepulveda said Assemblywoman Corbett decided to abandon AB 727, her bill regarding school emergency preparedness, in favor of pursuing a revised version in new legislation.

Mr. Sepulveda noted AB 977 (Alquist), providing replenishment of the Commission's

emergency earthquake investigation account, is on the suspense file of the Senate Appropriations Committee. The bill will probably be heard by the Senate Appropriations in June or August. Mr. Sepulveda added that the staff contacted the Governor's Office to enlist support for AB 977.

Mr. Sepulveda said SB 717 (Speier), a \$600 million bond measure, is on the suspense file in the Assembly Appropriations Committee.

Proposed Legislation

In terms of proposed legislation, Mr. Sepulveda recommended dealing with urban search and rescue (USAR) funding through a new bill directing OES to form an advisory group to identify California's USAR needs and propose funding strategies to be implemented as funds become available. He said the Senator Speier decided not to add USAR provisions to SB 717, so Senator Alarcon is considering sponsoring the new USAR legislation. Mr. Sepulveda added that the Governor's Office contacted the Commission for more information.

Mr. Sepulveda noted Assemblywoman Corbett is considering introducing a new bill regarding school earthquake preparedness in place of AB 724. The proposed legislation calls for schools complying with preparedness requirements to submit certification letters to the Seismic Safety Commission. That information would then be stored on a database, and schools in compliance would be earmarked for funding reimbursement. Mr. Sepulveda noted this mechanism would provide an incentive for schools to develop mitigation plans.

Mr. Sepulveda invited the Commission's feedback on potential legislation regarding placarding of hazardous hospital buildings. He said the staff has not yet found an author, but the provisions could be incorporated in an existing vehicle later.

Chairman Clark proposed considering each legislative proposal separately. There was general consensus among commissioners supporting proceeding with the USAR bill and finding an author.

ACTION: Commissioner Shapiro made a motion, seconded by Commissioner Mochizuki, that:

The Commission authorize the staff to proceed with sponsoring the bill as recommended.

* Motion carried, 9 - 0.

Chairman Clark suggested expressing conditional approval for Assemblywoman Corbett's new bill on school emergency preparedness, subject to review of the actual language.

ACTION: Commissioner Klein made a motion, seconded by Commissioner Shapiro, that:

The Commission support conceptually the proposed legislation on school emergency preparedness.

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* Motion carried, 8 - 0 (Commissioner Alarcon absent during voting).

Mr. Sepulveda commented that he spoke with OSHPD Deputy Director Kurt Schaefer recently about the hospital placarding proposal. Mr. Schaefer indicated OSHPD has no authority under existing regulations to impose such a requirement. He also expressed concerns about the fiscal impact and enforcement.

Mr. McCarthy reported that a recent informal survey of commissioners indicated most are inclined not to mandate placarding.

Commissioner Patwardhan spoke in support of placarding and urged the Commission to explore this option.

ACTION: Commissioner Patwardhan made a motion, seconded by Commissioner Gates, that:

The Commission move forward with placarding legislation and instruct the staff to attempt to find an author.

Chairman Clark said he intended to vote against the motion because he was uncomfortable with the current SPC-1 classifications. He expressed doubts about the effectiveness and value of placarding. Commissioner Shapiro agreed. He recommended the Commission use its energies elsewhere. He added placarding will not reduce seismic hazards. Commissioner Klein said he also opposed the measure because of doubts as to its effectiveness.

Commissioner Gates observed that from a legal perspective, the law is clear that owners of hazardous buildings have an obligation to warn users of the hazard. Not disclosing a known hazard creates a huge liability exposure. He supported placarding legislation for this reason.

Commissioner Adelman raised the possibility of deferring a decision until obtaining input from the Hospital Building Safety Board at their next quarterly meeting on April 18. Chairman Clark noted there is some urgency because of the deadline for introducing bills. Mr. Sepulveda added there may be an opportunity to amend an existing bill to include these provisions.

Chairman Clark proposed amending the motion to keep the issue open pending HBSB input rather than pushing to introduce a bill by the February 22 deadline. Commissioner Patwardhan accepted the amendment.

Commissioner Gates urged the Commission to proceed with placarding legislation without delay. Instead of waiting for HBSB input, he recommended moving ahead to find an author. Commissioner Klein pointed out that the placarding issue will be a difficult fight and the Commission has limited resources. Commissioner Gates, as seconder of the original motion, rejected Chairman Clark's proposed amendment. He called for a vote on the original motion.

Commissioner Patwardhan clarified that his motion was to instruct the staff to move forward with placarding legislation and try to find an author. Commissioner Gates added the bill should be introduced by the February 22 deadline.

- * Motion failed, 3 - 4 - 1 (Commissioners Gates, Moy, and Patwardhan in favor; Commissioners Mochizuki, Klein, Shapiro, and Clark opposed; and Commissioner Adelman abstaining).

Positions on Pending Bills

Mr. Sepulveda noted SB 842 (Speier) would allow five-year extensions of existing hospital seismic retrofit deadlines if the hospital agrees to comply with 2030 requirements by 2013; the bill also authorizes OSHPD to grant extensions on a case-by-case basis, provided the hospital submits a compliance plan with specific milestones. Mr. Sepulveda said the Commission supports the first provision for hospitals meeting 2030 requirements by 2013, but the Commission opposes the provision allowing case-by-case determinations. He recommended the Commission support SB 842 if amended to remove those provisions.

ACTION: Commissioner Klein made a motion, seconded by Commissioner Gates, that:

The Commission support SB 842 if amended as proposed.

- * Motion carried, 6 - 0 - 1 (Commissioner Adelman abstaining, Commissioners Alarcon and Clark absent during voting).

Mr. Sepulveda noted AB 1000 (Simitian) is a bill that would allow community colleges to use design-build contracts for projects exceeding \$10 million, similar to the bill for K-12 schools approved last year. Staff recommends amending the bill to make technical clarifications regarding design professionals and to require independent inspectors of record. Mr. Sepulveda suggested the Commission adopt an “oppose unless amended” position on AB 1000.

ACTION: Commissioner Gates made a motion, seconded by Commissioner Patwardhan, that:

The Commission adopt an “oppose unless amended” position on AB 1000, as recommended by the staff.

- * Motion carried, 8 - 0.

Mr. Sepulveda discussed four other bills of possible interest to the Commission. He said AB 1815 (Frommer), a homeland defense bond bill, might provide an opportunity to incorporate provisions regarding USAR funds. He said AB 1815 is a spot bill now, and the staff will be following it. Mr. Sepulveda noted AB 1823 (Papan), deals with Hetch Hetchy, and both SB 27 and SB 1350 are spot bills dealing with training emergency response officials to respond to deal with terrorism.

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Commissioner Klein informed the Commission that his position as manager of the east end of the Hetch Hetchy facility may give rise to an appearance of conflict of interest. He added that AB 1823 does not appear to pertain to seismic issues.

Commissioner Shapiro commented that the independent inspector of record provision, an amendment being sought to AB 1000, was overlooked in the K-12 legislation. He suggested exploring amending the K-12 bill. Mr. Sepulveda said he would speak to Assemblyman Simitian's office about incorporating that provision as well or identifying another vehicle.

ACTION: Commissioner Shapiro made a motion, seconded by Commissioner Patwardhan, that:

The Commission direct the staff to explore the possibility of amending the K-12 design-build law to incorporate independent inspector of record provisions.

* Motion carried, 8 - 0 (Commissioner Alarcon absent during voting).

Chairman Clark thanked Mr. Sepulveda for his report.

VII. WORKSHOP ON BENEFIT COST

Commissioner Patwardhan explained that justifying the costs of mitigation is an important challenge for the Seismic Safety Commission and others, and the purpose of the workshop was to explore various approaches to developing cost-benefit analyses. He noted this activity carries out one of the specific goals of the Commission's *California Earthquake Loss Reduction Plan* as well.

Commissioner Patwardhan noted the proposed federal budget contains language questioning the effectiveness of FEMA mitigation projects; in fact, the document asserts that 45 percent of FEMA-funded projects from 1993 to 2000 were not cost-effective, with the remaining 55 percent achieving only marginal cost-effectiveness. Commissioner Patwardhan observed that although there is general consensus that mitigation works, its benefits must be demonstrated and compared to other approaches. He noted that cost-benefit analyses are widely used in the engineering profession, by FEMA, and by the State of California. Commissioner Patwardhan added that justifying mitigation expenditures is even more important in the climate of declining resources and growing investment at risk.

Commissioner Patwardhan noted the Commission's *Plan* identifies 148 initiatives, including 11 critical ones with three- to five-year goals. Progress on the *Plan* initiatives will be evaluated in terms of setting priorities, monitoring performance, and measuring results. Commissioner Patwardhan added that quantifying the costs and benefits are an important part of producing accurate results.

Commissioner Patwardhan observed that other fields have used cost-benefit analyses with great

success, and he suggested looking at models developed for healthcare, environmental management, infrastructure, insurance, and social programs. He expressed hope that the guest speakers will give the Commission some ideas about simple and practical strategies that can be applied to analyzing the costs and benefits of seismic mitigation.

Dr. Ram Kulkarni, URS Corporation, discussed how cost-benefit analysis methodologies can be applied to earthquake loss reduction planning. He emphasized the need to prioritize actions so limited resources can be deployed most effectively. Dr. Kulkarni described various approaches to prioritization: subjective rating, gap analysis, cost-benefit analysis, and cost-benefit-impact analysis. He discussed the advantages and disadvantages of each approach and gave some examples of how they could be applied to infrastructure management, pavement maintenance programs, pipeline systems, and environmental programs.

Dr. Kulkarni recognized that quantifying seismic safety benefits presents challenges because of uncertainty in realizing benefits, difficulty in assigning money values to some impacts, forecasting effects of behavioral initiatives, intangible factors, and monitoring of progress. He recommended using a cost-benefit-impact methodology to best take into account life-cycle costs, loss reduction value, and intangible impacts. He suggested developing a simulation model, identifying measurable goals, and then monitoring progress on those goals. Dr. Kulkarni said the cost-benefit-impact analysis can be used as a planning, budgeting, and monitoring tool.

Dr. Guna Selvaduray, Collaborative for Disaster Mitigation, San Jose State University, discussed the effects of the Kobe earthquake, described the damages and loss to businesses and industries. He noted damage costs include direct losses as well as costs in terms of lost opportunities, lost business, lost lives, and overall societal and environmental losses. He showed examples of how mitigation measures in the petroleum industry were very effective in preventing damage and reducing economic losses.

Dr. Selvaduray said San Jose State University is engaged in a research project on nonstructural hazard mitigation. He said results of those studies demonstrate that mitigation results in cost savings. Dr. Selvaduray commented that although the value of mitigation seems evident, there is still considerable resistance because avoiding damage does not attract attention, and reducing loss potential is usually not taken into account. He encouraged the Commission to explore ways of disseminating information and helping people understand that mitigation works.

Dr. Richard Bernknopf, U.S. Geological Survey, discussed use of loss estimation tools to allocate mitigation resources most effectively in communities. He emphasized the need for systematic prioritization to concentrate loss avoidance efforts on the most vulnerable areas. Dr. Bernknopf described how cost-benefit analysis can be used to weigh advantages and disadvantages of potential courses of action.

Using Watsonville, California, as an example, Dr. Bernknopf showed how earth science information on ground failure can help predict areas of highest susceptibility and vulnerability. He explained how a land use portfolio model (LUPM) can identify the number of locations to be mitigated, project return on portfolio investment, estimate expected losses, and calculate the

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impact on overall community wealth. Dr. Bernknopf suggested using this methodology to evaluate alternative policies. He noted the LUPM tool focuses on maximizing wealth, not just minimizing losses.

Ms. Jean Ross, California Budget Project, discussed the use of cost-benefit analysis in state programs. She noted, first, there are few examples in state programs, and most of those focus on economic development or tax policy. In addition, she observed there is little monitoring, follow-up, or accountability.

Ms. Ross said that in looking at the costs and benefits of economic development programs, six factors emerged as keys to success. She suggested the same six factors might be used to look at other types of programs, including seismic mitigation. She recommended using: 1) clearly defined outcome; 2) outcome linked to a tool or incentive, 3) sufficient benefit to encourage the outcome; 4) whether rewards should be given for compliance, especially if the outcome would have occurred anyhow; 5) competing uses of public resources; and 6) consistency with existing laws, priorities, and policies.

Ms. Ross also commended the Seismic Safety Commission for looking at this important issue.

Mr. McCarthy observed that recent bills for tax credits and tax deductions have failed miserably because the value of mitigation could not always be demonstrated. He welcomed suggestions from Ms. Ross. Ms. Ross recommended focusing first on who bears the cost and who receives the benefit. She noted people are usually unwilling to shoulder costs for little benefit in return.

Mr. McCarthy noted that seismic experts agree a major urban earthquake is probably within the next twenty years. He suggested estimating damages on that basis. He added that creating incentives now can help reduce future losses. Ms. Ross commented that if an event is not certain to happen, regulation and government mandate can be an effective tool. She cited mandatory flood insurance as an example. She also pointed out that the payer and beneficiary are the same in that case.

Chairman Clark thanked the presenters for their information. He noted that within the last decade, new databases have been created, new studies have been released, and there are better tools for estimating losses.

Mr. McCarthy reported that a first draft of the Commission's initiative progress report will be ready soon. He said the Governor's Office approved the format. He noted the progress report and concrete cost-benefit information will be extremely useful in justifying legislation to the Department of Finance.

Commissioner Patwardhan thanked the guest speakers for their presentations. He noted the information and ideas about various cost-benefit approaches were very useful. Commissioner Patwardhan said he would write and circulate a summary of the presentations to all commissioners.

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Commissioner Patwardhan highlighted key points from the presentations. He noted cost-benefit analysis, cost-benefit-impact analysis, and the land use portfolio model appear to be possible and useful ways of demonstrating the value of mitigation. He noted all speakers emphasized the need to monitor performance and measure outcomes as well.

VIII. MISCELLANEOUS/GOOD OF THE MEETING

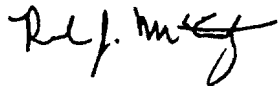
There were no other items brought to the Commission's attention.

IX. ADJOURNMENT

There being no further business, Commissioner Patwardhan made a motion, seconded by Commissioner Shapiro, that the meeting be adjourned. The meeting was adjourned at 12:58 p.m.

Karen Cogan
Executive Assistant

Approved by:

A handwritten signature in black ink, appearing to read 'R. McCarthy', written over a horizontal line.

Richard McCarthy
Executive Director